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THE STATUS OF FRIEDMANN'S BUSH-LARK *MIRAFRA PULPA*

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INTRODUCTION

Friedmann's Bush-Lark was described by Friedmann (1930a) from a specimen collected by E.A. Mearns on 19 May 1912 on the north side of the Sagon River, southern Shoa, Ethiopia. On the same expedition, one adult and two young individuals of a similar bird were collected on the northern Guaso Nyiro River near Archer's Post, Kenya, and these were described and named *Mirafra candida* by Friedmann (1930b). Since then there has been some argument over the status of these two forms, and their relationship to each other, to the Marsabit Lark *M. williamsi* (described by Macdonald 1956), the Singing Bush-Lark *M. cantillans marginata* from East Africa and the White-tailed Bush-Lark *M. passerina* from parts of South Africa.

The main views can be summarized as follows: Mackworth-Praed & Grant in their Handbooks merge both *pulpa* and *candida* into *M. c. marginata* (Series I, vol 2, 1960) and keep *M. passerina* separate (Series II, vol 1, 1962). *Mirafra williamsi* is also kept separate (Addenda of Series I, vol 2, 1960). White (1961), however, merges *pulpa*, *candida* and *williamsi* into one species - by priority *M. pulpa* - and merges *cantillans marginata* and *passerina* into *M. javanica*. Finally, Hall & Moreau (1970) keep all separate except for sinking *candida* into *pulpa* (see also Hall (1961) for a specific appraisal).

this agrees most closely with my experiences in the field of *pulpa* and *cantillans marginata* (hereafter referred to without the subspecific name but the race *marginata* should be implied throughout) and with what I have seen of museum specimens and descriptions in the literature of other species. English names follow Mackworth-Praed & Grant (1960, 1962).

THREE RECENT SPECIMENS FROM TSAVO NATIONAL PARK, KENYA

In the past four years, three more specimens of *M. pulpa* have been collected in Tsavo National Park, Kenya as detailed below; all three are in the National Museum, Nairobi.

1. reg. no. 16142 - collected by G.C. Backhurst at Ngulia Safari Lodge, Tsavo N.P. (West) on 2 December 1972. The bird had killed itself against a wall inside the Lodge at 04.00 hrs. This specimen was sent to the United States National Museum and compared with the type by G.E. Watson. The two specimens listed below were compared in Nairobi with no. 16142.

2. reg. no. 16143 - a male collected by D.J. Pearson, at the Ngulia Safari Lodge lights at 04.00 hrs on 12 November 1974.

3. reg. no. 16144 - a male which I collected near Voi Safari Lodge, Tsavo N.P. (East) on 4 January 1977.

Biometric data of these three birds and of the types of *M. pulpa* and *M. candida* are given in Table 1.

TABLE 1

Biometric data of specimens of Miraфра pulpa

Specimen	Weight	Wing length	Tail length	Bill			Tarsus length	Hind-toe length	Hind-claw length
				length	depth	width			
16142	23.1	82	57.5	11.5*	7.0	6.5	21.5	6.0	6.0
16143	21.2	81	55.5	11.5*	6.5	7.0	21.0	6.0	5.0
16144	21.5	85	(37.5)†	12*	6.5	6.5	23.0	6.5	6.0
<i>pulpa</i> type	-	84	60.5	14**	-	-	22	7	6
<i>candida</i> type	-	80	55.5	13.5**	-	-	20	6.5	5.2

* = measured from feathers

** = measured from skull

† = still growing

Notes: weights (g) from museum labels; measurements (mm) of the Nairobi Museum specimens taken by myself; measurements (mm) of the types from Hall (1962)

Other data from the specimens are as follows :

16142: iris brown, bill horn-brown, feet pinkish;

16143: iris brown, bill, upper blackish, lower pink-horn, feet fleshy pink;

16144: iris dark brown, bill, upper dark horn, lower (and lower edge of upper) paler horn, feet dark flesh.

The skull of 16144 was fully pneumatized and the bird had testes c. 5 mm long. The stomach contained grass seeds, insect remains (which included small grasshoppers and beetles, probably weevils), and a lot of small quartz grains (G.R. Cunningham-van Someren pers. comm.).

GENERAL DESCRIPTION OF *MIRAFRA PULPA* (SPECIMEN 16144)

Upperparts: brown with paler edges to the feathers (especially so on the back of the neck) and with contrasting, darker centres.

Head: crown as upperparts; a slight, pale eyestripe; lores brown and a whitish line separating these from a dark brown conglomeration of spots on the side of

the upper breast.

Underparts: throat white, breast slightly tawny with dark brown spots, belly white with a faint tawny tinge, but this might be soil stain as the bird was collected in a red soil area.

Wings: primaries and secondaries brown with rufous outer edges, tertials reddish-brown with paler edges and darker centres. Wing-coverts: similar patterning to the upperparts but reddish-brown, not brown, basal colour, and with very dark subterminal spots.

Tail (all feathers on this specimen are only half-grown): other specimens show the outer feathers, and the outer web of the next, white; the inner web of this, and the next two, very dark brown, and the two innermost paler, and slightly rufous, with their edges paler still.

PLUMAGE COMPARISONS WITH SIMILAR SPECIES

I have compared the three *M. pulpa* in Nairobi directly with specimens of Rufous Short-toed Lark *Calandrella somalica*, Fawn-coloured Lark *Mirafra africanoides*, Northern White-tailed Bush-Lark *M. albicauda*, *M. cantillans*, Flappet Lark *M. rufocinnamomea* and *M. williamsi*, and have also looked at these and *M. passerina* in the British Museum, but without direct comparison with *M. pulpa*. Differences noted are as follows (in each case the race which occurs nearest Tsavo has been compared):

Calandrella somalica: slightly smaller and generally paler and greyer, especially on the mantle, and the primaries have much less rufous. The only white in the tail is on the outer web of the outermost feather.

Mirafra africanoides: slightly larger; more black and white and less brown evident on the upperparts; considerably more rufous on the primaries and less on the tertials; tail as in *C. somalica*.

Mirafra albicauda: very dark, almost black on the upperparts.

Mirafra cantillans: smaller and much greyer; much less patterning and no rufous on the tertials or wing-coverts. See also field characters given below.

Mirafra passerina: slightly larger; upperparts and wing-coverts much less patterned and there is almost no rufous on the wing-coverts or tertials. Less white in the tail and the bill is somewhat heavier.

Mirafra rufocinnamomea: no white in tail.

Mirafra williamsi: the five specimens I have seen (two in Nairobi and three in the British Museum) are rather variable in general colour. They are fairly similar to *pulpa* but are much more uniform on the upperparts, and the bill looks considerably heavier (see Table 2). For other specific differences see Hall (1961) and Keith & Twomey (1968).

TABLE 2

Bill measurements of Mirafra williamsi

	Nairobi Museum		British Museum		
	1	2	1	2	3
length (to feathers)	12.5	13.0	14.0	13.5	14.0
depth	7.5	7.5	7.5	8.0	8.0
width	6.5	7.0	7.5	7.5	8.0

Notes: measurements (mm) taken by myself in a similar way to those of *pulpa* in Table 1.

FIELD CHARACTERS AND HABITS OF *MIRAFRA PULPA* IN TSAVO N.P. (EAST)

The following notes are based almost entirely on observations made before I had secured a specimen and had identified the species positively. The birds involved were noted as a separate 'species' on the basis of their song.

The song is very characteristic, a single drawn-out 'hoo-ee-oo' with a slight emphasis on the middle part. This phrase is repeated at intervals of one or two seconds and is uttered from a perch (usually on top of a bush or small tree) or while 'floating' around in undulating flight, up to about 10 m, though more usually at around 5 m. It rarely flies around singing for longer than 20-30 s at a time. The song carries a long way and the bird sings throughout the day and may also be heard at night, particularly at full moon. I did not hear any other call.

The song is very unlike either *cantillans* or *passerina*, two of its closest relatives. *Mirafrapa cantillans* has a ragged four-note trill which reminded me strongly of the song of a Corn Bunting *Emberiza calandra* in Europe. This is usually uttered in a prolonged song-flight at around 50 m (cf. *pulpa*). *Mirafrapa passerina*'s song is described as a monotonous 'chloritwee', uttered from the ground, a bush, or from the air at no great height, and it also calls in the moonlight (McLachlan & Liversidge 1970). The song and calls of *Mirafrapa williamsi* are unknown.

The preferred habitat of *pulpa* in Tsavo East is rather open 'bushed grassland' (bush canopy, cover about 2-8 per cent.) with a fair amount of grass. It also occasionally occurs in areas of denser bushes. Most of my records are from the western side of the Park. It is not common anywhere and there are many areas which appear to be suitable habitat but contain no *pulpa*. *Mirafrapa cantillans* also occurs; it is rather more widespread and is often found in grassland without any bushes, in addition to 'bushed grassland'.

All but two of my records of *pulpa* are in December and January; that is, they arrive soon after the start of the so-called 'short' rains and leave about a month into the following dry season. The other two records were on 30 March and 16 April 1976 in the so-called 'long' rains. This pattern of occurrence is paralleled by several other intra-African migrants, and I think it is probable that more of these species as well as *pulpa* would reappear in April-May if these 'long' rains were good. But in both 1975 and 1976, when I was in Tsavo, they effectively failed.

There are two facts which suggest that this is a real movement, as opposed to them going unnoticed at other times of year because they are not singing:

a) very few birds resembling *pulpa* were seen at other times of the year, especially in 1976. I did not try to distinguish *pulpa* from *cantillans* in the field (unless singing) and the lack of records over most of the year suggests that both are migrants, as *cantillans* certainly is in Tanzania (Mackworth-Praed & Grant 1960) and probably also at Ngulia where D.J. Pearson (pers. comm.) caught one inside the Lodge at night on 6 December 1972.

b) the two specimens from Ngulia were collected at the Lodge at night, presumably having been attracted to the lights along with large numbers of Palaearctic and some other intra-African migrants known to be moving at the time (see Pearson & Backhurst 1976). Also, they were collected at the time of year when my birds seemed to be moving into Tsavo East.

The lack of records from the dry season, and the preference for the western side of the Park and a fair amount of grass, suggest that the species might prefer a wetter area than most of Tsavo East can provide; this has been suggested before (Hall 1961) as a possible ecological separation from *williamsi* which appears to be restricted to the dry overgrazed areas in the northern Kenya deserts.

Miraфра pulpa is usually rather shy and will not allow a closer approach than about 50 m. When disturbed from a bush it will usually fly into the grass. Its flight is rather slow, unlike *cantillans* which flies low and fast and stops abruptly by diving into the grass. *M. pulpa* probably feeds predominantly on the ground like most other larks, but I have no observations of feeding individuals. Also, I have no definite breeding records though I suspect that they probably breed in Tsavo.

There have been two recent possible records of *M. pulpa* which I will give as they may well be supported by future positive observations. Following my description of the song, A.D. Forbes-Watson observed some possible *pulpa* in Rhino Valley, Tsavo N.P. (West) on 1-2 January 1977. Miss P.M. Allen and Mrs L. Campbell saw a lark in Meru N.P. in early January 1977; later, in the National Museum, Nairobi they picked out my specimen of *pulpa* as the species they had seen (G.R. Cunningham-van Someren *in litt.*).

DISCUSSION

Apart from *pulpa* and *cantillans* there are two other species of *Miraфра* in Tsavo East, the Red-winged Bush Lark *M. hypermetra* and the Pink-breasted Lark *M. poecilosterna*. Both are residents although an example of *hypermetra* has been caught at the Ngulia lights in Tsavo West at 05.00 hrs on 26 December 1976 (G.C. Backhurst pers. comm.). *M. hypermetra*, which is a great deal larger than *pulpa*, occurs commonly in grassland, usually with some bushes or dead sticks, which it uses as song-posts. It has a varied and melodious song, often imitating other species. *M. poecilosterna* occurs commonly almost everywhere in the Park except in very open habitats and in very thick *Commiphora* woodland scrub. It is rather more pipit-like and has a rather squeaky song of 3-4 slow introductory notes followed by 3-4 quicker ones on a slightly descending scale.

There remain many questions concerning *M. pulpa* (and other similar larks); the main one concerns its range at various seasons, and whether or not the whole population is migratory. The Ngulia specimens suggest that the Tsavo birds arrive from further north, and all other specimens (assuming *candida* = *pulpa*) have been from north of Tsavo. However, most of this area is very dry which does not fit well with the species' apparent preference for wetter areas of Tsavo. One specimen suggests that they may spend at least some of the non-breeding season around Isiolo - the adult '*candida*' was in wing-moult (Friedmann 1930b). Also, the type of *pulpa* was collected in May in Ethiopia, which might be taken to show that some of the population might be non-migratory; May is a time when some birds might be expected to be still in Tsavo after good 'long' rains. Another point worth considering is that suitable habitat has only appeared in Tsavo to any extent in the last 20 years as the *Commiphora* woodland scrub has been progressively opened up by elephants and fire. Perhaps, therefore, the whole migratory behaviour of the species is a recent development.

CONCLUSIONS

My field observations amplify the view of Hall & Moreau (1970) for keeping *Miraфра pulpa* a separate species, at least from *M. cantillans*. I have not seen the specimens of *M. candida* but there seems to be general agreement that it is the same species as *pulpa*. Similarly, I agree with others that *M. williamsi* should also be kept separate, at least until someone has studied it in the field

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SOME RECENT RECORDS OF PALAEARCTIC BIRDS IN KENYA AND TANZANIA ¹

Backhurst, Britton & Mann (1973) reviewed the occurrence and status of what they then considered as the less common Palaearctic migrants of Kenya and Tanzania, taking into account records up to June 1971. A number of scattered records and accounts of scarcer migrants have since appeared, mostly in *EANHS Bulletin*. The sub-committee Bird Report should now provide a means of collating and reviewing such records on a regular annual basis, and the first such report, dealing principally with material from the second half of 1976, and from 1977, is planned for publication during 1978. In the meantime we are aware of a considerable backlog of unpublished Palaearctic records which we have collated here. This list attempts to complete the updating of the paper of Backhurst *et al.* to June 1976 and includes, in addition, some exceptional records of commoner species not within the province of the 1973 paper. The following account is divided into two parts, the first of which appears here, and the second, which includes the Passerines, will appear in the September *Scopus*. All records are for Kenya unless followed by 'T' (= Tanzania). Most of the records here were submitted for inclusion in the Records Section of the *EANHS Bulletin*; a few were published (1976: 80-82) and are repeated here, preceded by an asterisk. It should be stressed that the records presented here have not been verified by the sub-committee - many were submitted without any supporting details.

¹ Compiled by members of the E.A.N.H.S. Ornithological sub-committee.